In the Claims

Please amend claims 4 and 5 and add new claims 9 and 10 as follows:

1. (ORIGINAL) A method of generating heat using a hydrogen condensate,

wherein the hydrogen condensate comprises a metal nano-ultrafine particle containing a plurality of metal atoms and a plurality of hydrogen isotope atoms solid-dissolved among the plurality of metal atoms, and at least two of the plurality of hydrogen isotope atoms are condensed so that an inter-atomic nuclear distance between the two hydrogen isotope atoms is smaller than or equal to an internuclear spacing of a molecule consisting of the two hydrogen isotope atoms,

the heat generation method comprising:

applying energy to the hydrogen condensate; and

generating heat by causing the at least two hydrogen isotope atoms to react with each other due to the energy.

2. (ORIGINAL) A method according to claim 1, wherein the plurality of metal atoms are metal atoms of at least one species selected from the group consisting of palladium, titanium, zirconium, silver, iron, nickel, copper, and zinc.

3. (ORIGINAL) A method of generating heat using a hydrogen condensate,

wherein the hydrogen condensate comprises a metal alloy composite containing a plurality of metal atoms and a plurality of hydrogen isotope atoms solid-dissolved among the plurality of metal atoms, and at least two of the plurality of hydrogen isotope atoms are condensed so that an inter-atomic nuclear distance between the two hydrogen isotope atoms is smaller than or equal to an internuclear spacing of a molecule consisting of the two hydrogen isotope atoms,

the heat generation method comprising:

applying energy to the hydrogen condensate; and

generating heat by causing the at least two hydrogen isotope atoms to react with each other due to the energy.

4. (CURRENTLY AMENDED) A method according to claim ~~1 or~~ 3, wherein the energy is generated based on at least one of ultrasonic wave, strong magnetic field, high pressure, laser, laser explosive flux-compression, high-density electron beam, high-density current, discharge, and chemical reaction.

5. (CURRENTLY AMENDED) A method according to claim ~~1 or~~ 3, wherein in the step of generating heat, the at least two hydrogen isotope atoms are reacted with each other to generate a helium molecule in addition to the heat.

6. (ORIGINAL) A hydrogen condensate, comprising:

a metal nano-ultrafine particle containing a plurality of metal atoms; and

a plurality of hydrogen isotope atoms solid-dissolved among the plurality of metal atoms,

wherein at least two of the plurality of hydrogen isotope atoms are condensed so that an inter-atomic nuclear distance between the two hydrogen isotope atoms is smaller than or equal to an internuclear spacing of a molecule consisting of the two hydrogen isotope atoms.

7. (ORIGINAL) A hydrogen condensate according to claim 6, wherein the plurality of metal atoms are metal atoms of at least one species selected from the group consisting of palladium, titanium, zirconium, silver, iron, nickel, copper, and zinc.

8. (ORIGINAL) A hydrogen condensate, comprising:

a metal alloy composite containing a plurality of metal atoms; and

a plurality of hydrogen isotope atoms solid-dissolved among the plurality of metal atoms,

wherein at least two of the plurality of hydrogen isotope atoms are condensed so that an inter-atomic nuclear distance between the two hydrogen isotope atoms is smaller than or equal to an internuclear spacing of a molecule consisting of the two hydrogen isotope atoms.

9. (NEW) A method according to claim 1, wherein the energy is generated based on at least one of ultrasonic wave, strong magnetic field, high pressure, laser, laser explosive flux-compression, high-density electron beam, high-density current, discharge, and chemical reaction.

10. (NEW) A method according to claim 1, wherein in the step of generating heat, the at least two hydrogen isotope atoms are reacted with each other to generate a helium molecule in addition to the heat.